

REMARKS

The Examiner is thanked for the thorough examination of the present application. The Office Action has, however, tentatively rejected all examined claims 1-22. Specifically, the Office Action rejected all claims under either 35 U.S.C. § 102(b) or 103(a), based on the principal reference of U.S. 2002/0047818 to Yamamoto. In response, claims 1, 3-4, 7-8, 13 and 15-19 have been amended, and claims 5-6, 9-12, 14 and 20-22 are cancelled without prejudice or disclaimer of the subject matter contained therein.

After entry of the foregoing amendments, claims 1-4, 7-8, 13 and 15-19 remain pending in the present application. Support for the amendments can be found in the specification and claims as filed. Accordingly, the amendments add no new matter to this application. Reconsideration of the application in view of the foregoing amendments and following comments is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102

The Office Action rejected claims 1-6, 9-11, 13-14, 17-18 and 20-21 under 35 U.S.C. §102(b) as allegedly anticipated by Yamamoto et al. (US 2002/0047818, hereinafter referred to as Yamamoto). Of the rejected claims, claims 1 and 13 are independent claims, and claims 5-6, 9-11, 14 and 20-21 have been cancelled.

When applying 35 U.S.C. §102, the following tenets of patent law must be adhered to:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). **"The identical invention must be shown in as complete detail as is contained in the ... claim."** *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). (MPEP §2131)

The connecting relations of the black image transistors in independent claims 1 and 13 (as amended) are different from those of the Yamamoto reference. In the Yamamoto, the drain of the TFT_C(i, j) is connected to the pixel electrode PE(i, j) of the liquid crystal cell C_LC(i, j), and the opposite electrode CE of the liquid crystal cell C_LC(i, j) is connected to the common line CL(i) of the same pixel. (see Yamamoto, Fig.15 and paragraph [0086], lines 12-17, "... the opposite electrode CE ... is connected electrically to the common line CL(i) in the outside of the display region")

When the TFT_C(i, j) is switched on, the common line CL(i) connected to the source of the TFT_C(i, j) is short with the pixel electrode PE(i, j) connected to the drain of the TFT_C(i, j). As mentioned above, the opposite electrode CE is electrically connected to the common line CL(i). Therefore, the opposite electrode CE is short to the pixel electrode PE(i, j). That is, the two electrodes of the liquid crystal cell C_LC(i, j) **are short**, and the voltage applied to the liquid crystal cell C_LC(i, j) is thus cleared.

In the present application, the black image transistor and the first electrode of the liquid crystal cell are connected together. Significantly, and in distinction to Yamamoto, the second electrode of the liquid crystal cell is not connected to the black image transistor, but is independently connected to a common voltage. Therefore, when the black image transistor is switched on, the two electrodes of the liquid crystal **are not shorted**. In the first embodiment, the first electrode is shorted with the common line 306; in the second and third embodiments, the voltage of the first electrode is coupled by the voltage of the black image line; making the data voltage stored in the liquid crystal cell be thus cleared.

In short, in Yamamoto, when the transistor TFT_C(i, j) is turned on, the two electrodes of the liquid crystal cell C_LC(i, j) are connected to each other through the transistor TFT_C(i,

j)); however, in the present application, when the black image transistor is turned on, the first electrode and the second electrode of the liquid crystal cell do not conduct. Accordingly, the working principles of the Yamamoto and the embodiments of present application are substantially and fundamentally different. For at least this reason, the rejection of claims 1 and 13 should be reconsidered and withdrawn.

In addition, the amended claims 1 and 13 specify that the enable pulse is sent through the black image line to enable the black image transistor. In contrast, Yamamoto sends the clear pulse 212 through the common line 203 to enable transistor 107. (see Yamamoto, Fig.1 and paragraph [0039] “Further, because the second active element 107 shown in Fig.2 operates by liquid crystal applied voltage clear pulses 212 being applied to common line potential 203, and the voltage applied to liquid crystal 104 is canceled, the image becomes the blanking display of a black display.”)

More precisely, the common line of the claimed embodiments is connected to a common voltage (Vcom), which does not contain any pulses relating to the black image. Thus, the claimed embodiments are fundamentally different from disclosure of Yamamoto.

In addition, Yamamoto lacks any suggestion that the reference should be modified in a manner required to meet the amended claims 1 and 13 of the present application. Accordingly, Applicant respectfully requests the 35 U.S.C. §102(b) rejection of claims 1 and 13 to be reconsidered and withdrawn.

In addition, insofar as claims 2-4 depend from independent claim 1 and claims 17-18 depend from independent claim 13, and these claims add further limitations thereto, the 35 U.S.C. §102 (b) rejection of these claims should be withdrawn as well.

Claim Rejection - 35 U.S.C. § 103

With respect to paragraphs 5 of the Office Action, the Office Action rejected claims 12, 19 and 22 under 35 U.S.C. §103(a) as being unpatentable over Yamamoto in view of Ono et al. (US 5,526,013, hereinafter referred to as Ono). Of the rejected claims, claim 19 depends from the amended claim 13, and claims 12 and 22 are cancelled without prejudice.

As stated above, the black image insertion circuit for display defined by the amended claim 13 is patentable over the Yamamoto. Thus, even if Yamamoto could be properly combined with the unequal pulses disclosed by Ono, the proposed combination would not show all of the novel physical features of claim 19. Therefore, the novel features of claim 19 produce new and unexpected results and hence are unobvious and patentable over these references.

The Office Action also rejected claims 7-8 and 15-16 under 35 U.S.C. §103(a) as allegedly unpatentable over Yamamoto in view of Yi et al. (US 6,791,522 hereinafter referred to as Yi). Of the rejected claims, claims 7-8 depend from the amended claim 1, and claims 15-16 depend from the amended claim 13.

As stated above, the black image insertion circuit and method for display defined by the amended claims 1 and 13 are patentable over the Yamamoto. Thus, even if the Yamamoto could be properly combined with the reset diode disclosed by Yi, the proposed combination would not show all of the novel physical features of claims 7-8 and 15-16. Therefore, the novel features of claims 7-8 and 15-16 produce new and unexpected results and hence are unobvious and patentable over these references.

As a separate and independent basis for the patentability of claims 7-8, 12, 15-16, 19, and 22, Applicant respectfully traverses the rejections as failing to identify a proper basis for

combining the cited references. For example, in combining Yi with Tamamoto, the Office Action stated only that the motivation for the combination “would have been both an easier and cheaper method of manufacture.” (Office Action, page 9). This alleged motivation is clearly improper in view of well-established Federal Circuit precedent.

It is well-settled law that in order to properly support an obviousness rejection under 35 U.S.C. § 103, there must have been some teaching in the prior art to suggest to one skilled in the art that the claimed invention would have been obvious. W. L. Gore & Associates, Inc. v. Garlock Thomas, Inc., 721 F.2d 1540, 1551 (Fed. Cir. 1983). More significantly,

“The consistent criteria for determination of obviousness is whether the prior art would have suggested to one of ordinary skill in the art that this [invention] should be carried out and would have a reasonable likelihood of success, viewed in light of the prior art. ...” Both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure... In determining whether such a suggestion can fairly be gleaned from the prior art, the full field of the invention must be considered; for the person of ordinary skill in the art is charged with knowledge of the entire body of technological literature, including that which might lead away from the claimed invention.”

(*Emphasis added.*) In re Dow Chemical Company, 837 F.2d 469, 473 (Fed. Cir. 1988).

In this regard, Applicant notes that there must not only be a suggestion to combine the functional or operational aspects of the combined references, but that the Federal Circuit also requires the prior art to suggest both the combination of elements and the structure resulting from the combination. Stiftung v. Renishaw PLC, 945 Fed.2d 1173 (Fed. Cir. 1991). Therefore, in order to sustain an obviousness rejection based upon a combination of any two or more prior art references, the prior art must properly suggest the desirability of combining the particular elements to derive a black image insertion method and apparatus, as claimed by the Applicant.

When an obviousness determination is based on multiple prior art references, there must be a showing of some “teaching, suggestion, or reason” to combine the references. Gambro Lundia AB

v. Baxter Healthcare Corp., 110 F.3d 1573, 1579, 42 USPQ2d 1378, 1383 (Fed. Cir. 1997) (also noting that the “absence of such a suggestion to combine is dispositive in an obviousness determination”).

Evidence of a suggestion, teaching, or motivation to combine prior art references may flow, inter alia, from the references themselves, the knowledge of one of ordinary skill in the art, or from the nature of the problem to be solved. See In re Dembiczak, 175 F.3d 994, 1000, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Although a reference need not expressly teach that the disclosure contained therein should be combined with another, the showing of combinability, in whatever form, must nevertheless be “clear and particular.” Dembiczak, 175 F.3d at 999, 50 USPQ2d at 1617.

If there was no motivation or suggestion to combine selective teachings from multiple prior art references, one of ordinary skill in the art would not have viewed the present invention as obvious. See In re Dance, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); Gambro Lundia AB, 110 F.3d at 1579, 42 USPQ2d at 1383 (“The absence of such a suggestion to combine is dispositive in an obviousness determination.”).

Significantly, where there is no apparent disadvantage present in a particular prior art reference, then generally there can be no motivation to combine the teaching of another reference with the particular prior art reference. Winner Int'l Royalty Corp. v. Wang, No 98-1553 (Fed. Cir. January 27, 2000).

For at least the additional reason that the Office Action failed to identify proper motivations or suggestions for combining the various references to properly support the rejections under 35 U.S.C. § 103, those rejections should be withdrawn.

Accordingly, the Applicant respectfully submits that claims 7-8, 15-16 and 19 are allowable over the art of record and respectfully requests the 35 U.S.C. §103(a) rejection to be reconsidered and withdrawn.

Conclusions

For all of the above reasons, applicants submit that the specification and claims are now in proper form, and that the claims define patentably over the prior art of record. Therefore applicants respectfully request issuance for this case at the Office Action's earliest convenience.

If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

No fee is believed to be due in connection with this Amendment and Response to Office Action. If, however, any fee is deemed to be payable, you are hereby authorized to charge any such fee to deposit account 20-0778.

Respectfully submitted ,

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